

WHAT IS CLAIMED:

1. A light emitting diode assembly comprising:

a light emitting diode having a front luminescent portion and a mounting base, said mounting base having a heat transfer plate on a rear surface thereof and a first and second contact lead extending from the sides thereof;

a mounting die, said mounting die being thermally conductive, said mounting die having a bottom surface and a side wall extending upwardly from said bottom surface, said bottom surface and said side wall cooperating to form a cavity therein, wherein said light emitting diode is received in said cavity with said heat transfer plate in thermal communication with said bottom surface of said mounting die.

2. The light emitting diode assembly of claim 1, wherein said second contact lead of said light emitting diode is in electrical communication with said mounting die.

3. The light emitting diode assembly of claim 1, further comprising:

a void in said rear surface of said mounting die corresponding to said first contact lead of said light emitting diode disposed to prevent said first contact lead of said light emitting diode from contacting said mounting die.

4. The light emitting diode assembly of claim 3, wherein said second contact lead of said light emitting diode is in electrical communication with said mounting die.

a void in said rear surface of said mounting die corresponding to said first contact lead of said light emitting diode disposed to prevent said first contact lead of said light emitting diode from contacting said mounting die.

5. The light emitting diode assembly of claim 4, further comprising:

a circuit board adjacent to said mounting die, said circuit board in electrical communication with said first contact lead of said light emitting diode.

6. The light emitting diode assembly of claim 5, further comprising:

means for fastening said light emitting diode, said mounting die and said circuit board to form a single assembly.

7. A heat sink assembly for mounting a light emitting diode comprising:

a mounting die, said mounting die having a bottom wall and a side wall extending upwardly from said bottom wall, said side wall and said bottom wall cooperating to form an interior cavity, said interior cavity being configured to receive a light emitting diode, wherein a luminescent portion of said light emitting diode directs light output outwardly from said cavity; and

means for conducting heat from said light emitting diode to said mounting die.

8. The heat sink assembly of claim 7, wherein said means for conducting heat is a heat transfer plate on a rear surface of said light emitting diode, said heat transfer plate being in thermal communication with said bottom wall of said mounting die.

9. The light emitting diode assembly of claim 7, further comprising:  
means for fastening said light emitting diode to said mounting die to form a single assembly.
10. A flashlight assembly comprising:  
at least one battery, said battery having a first and second electrical contact, said first contact;  
a flashlight head assembly connected to said at least one battery and including,  
a light emitting diode having a front luminescent portion and a rear mounting base, said mounting base having a heat transfer plate on a rear surface thereof and a first and second contact lead extending from the sides thereof,  
a mounting die, said mounting die being thermally conductive, said mounting die having a bottom surface and a side wall extending upwardly from said bottom surface, said bottom surface and said side wall cooperating to form a cavity therein, wherein said light emitting diode is received in said cavity with said heat transfer plate in thermal communication with said bottom surface of said mounting die, wherein said mounting die conducts heat away from said light emitting diode,  
an exterior enclosure; and

means for selectively energizing said light emitting diode disposed between and in electrical communication with said first and second contacts of said battery and said first and second contacts on said light emitting diode.